

**In the Claims**

The listing of claims will replace all prior versions, and listing, of claims in the application.

Claims 1-12 (Canceled)

13. (Currently amended) In a method for treatment of a disease in a subject by ionizing radiation therapy wherein the ionizing radiation therapy causes side effects in the subject, the improved method comprising administering to the subject a side-effect reducing amount of a medicine comprising a selective cyclooxygenase-2 inhibitor as the effective agent, the selective cyclooxygenase-2 inhibitor being effective to decrease radiation-caused gastrointestinal effects, radiation-caused fatigue, reduce radiation-caused diarrhea; reduce radiation-caused rectal bleeding, and reduce symptoms of radiation-caused urinary frequency, dysuria, and/or nocturia.

14. (Previously presented) The method of claim 13, wherein the cyclooxygenase-2 inhibitor is refecoxib.

15. (Previously presented) The method of claim 13, wherein the cyclooxygenase-2 inhibitor is celecoxib.

16. (Withdrawn). The method of claim 13, wherein the reduced side-effect comprises radiation-caused effects on the gastrointestinal tract.

17. (Canceled)

18. (Withdrawn) The method of claim 13, wherein the radiation-caused side effect is diarrhea.

19. (Withdrawn) The method of claim 13, wherein the radiation caused side effect is rectal bleeding.

20. (Withdrawn) The method of claim 13, wherein the radiation-caused side effect is urinary frequency.

21. (Withdrawn) The method of claim 13, wherein the radiation-caused side effect is dysuria.

22. (Withdrawn) The method of claim 13, wherein the radiation-caused side effect is nocturia.

23. (Previously presented) The method of claim 13, wherein the cyclooxygenase-2 inhibitor is administered orally, topically, parenterally, or by inhalation spray.

24. (Previously presented) The method of claim 23, wherein the cyclooxygenase-2 inhibitors is administered as a tablet, troche, lozenge, aqueous or oily suspension, dispersible powder or granule, emulsion; hard or soft capsule, syrup or elixir.

25. (Previously presented) The method of claim 24, wherein the selective cyclooxygenase-2 inhibitor is administered in a dosage amount of about 0.01 to 200 mg/kg of body weight of the subject.

26. (Previously presented) The method of claim 25, wherein the selective cyclooxygenase-2 inhibitor reduces the side effects by at least 25%.

27. (New) In a method for treatment of a disease in a subject by ionizing radiation therapy wherein the ionizing radiation therapy causes side effects in the subject, the improved method comprising administering to the subject a side-effect reducing amount of a medicine comprising a selective cyclooxygenase-2 inhibitor as the effective agent, the selective cyclooxygenase-2 inhibitor being effective to decrease radiation-caused fatigue.